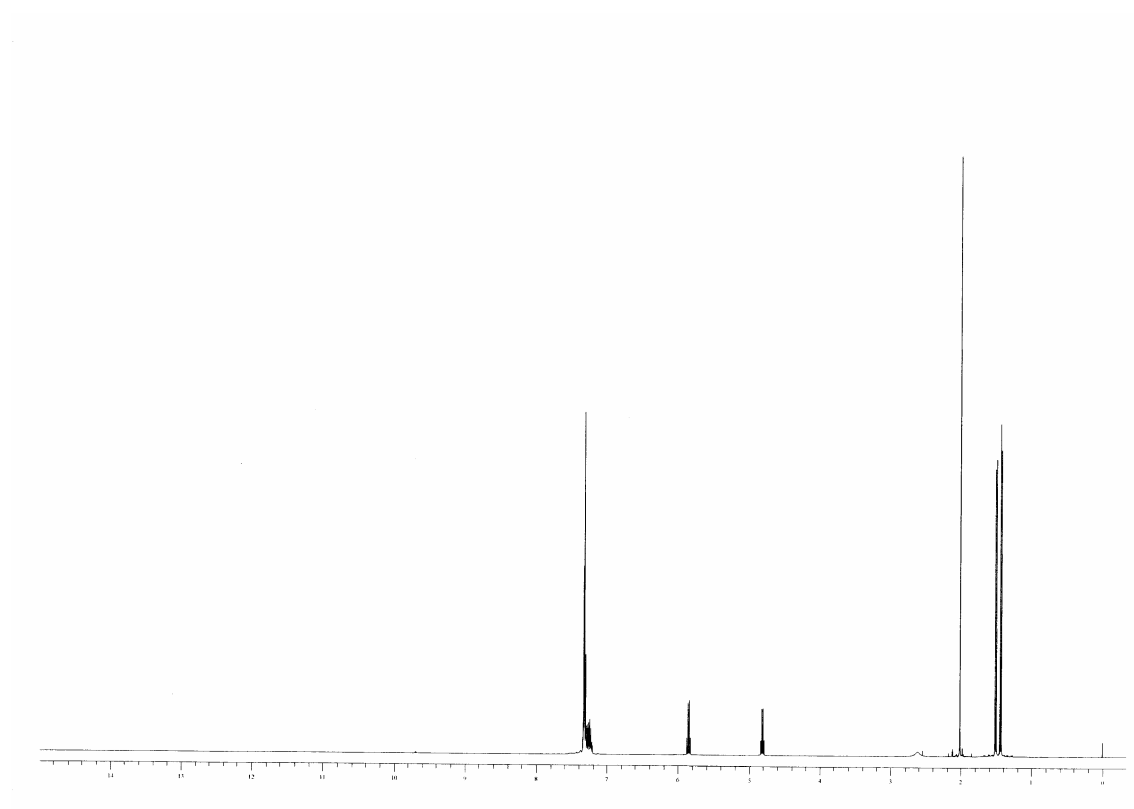
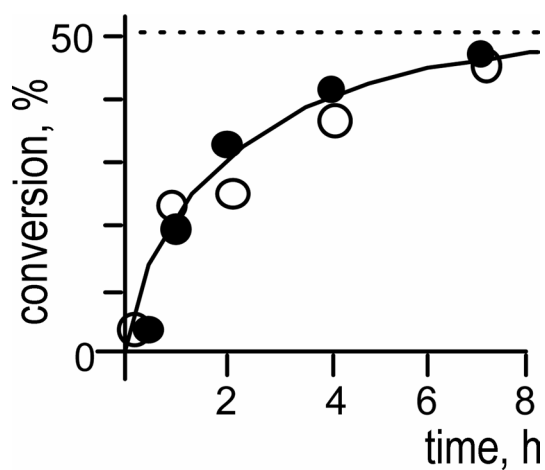


**Supporting information**



NMR spectrum of the product, (*S*)-1-phenylethanol and the corresponding (*R*)-acetate, without any purification procedure.



**Fig.** Kinetic resolution of (*R/S*)-1 by Novozym in scCO<sub>2</sub> using batch reactor.

Conditions: (*R/S*)-1: 0.10 mL, 2: 0.50 mL, Novozym: 5.0 mg, scCO<sub>2</sub>: 10 mL, 40 °C,  
x: 9 MPa, circle: 13 MPa

**Table.** Kinetic resolution of (*R/S*)-**1** by Novozym using scCO<sub>2</sub> flow reactor

Run	Time/ h <sup>a</sup>	Sampling time/ min	Recovered, g <sup>b</sup>	( <i>S</i> )- <b>1</b> , % ee	( <i>R</i> )- <b>3</b> , % ee	Conv., % <sup>c</sup>	<i>E</i>
1	0.0	57	3.48	85.9	99.7	46	1900
2	1.0	47	2.87	90.9	99.7	48	1820
3	1.8	36	2.22	92.0	99.6	48	1840

Conditions: Novozym: 5.0 mL (1.89 g), scCO<sub>2</sub> flow: 1.5 mL/min, **1:2** = 1:0.5, flow rate of a mixture of **1** and **2**: 0.070 mL/min, 42 °C, 13.0 MPa. <sup>a</sup>Reaction time after reaching the steady reaction conditions. <sup>b</sup>Recovered products included unreacted (*S*)-**1** and the product ester (*R*)-**3**. <sup>c</sup> Conversion to **3** based on the starting amount of **1**.

*Experimental procedure:* The enzymatic continuous reactions were carried out isothermally in a continuous up-flow tubular reactor (1/2 inch x 10 mm x 135 mm).<sup>9</sup> CO<sub>2</sub> was sent to the reactor by a HPLC pump (JASCO, PU-1580) equipped with a cooler, and the substrate mixture was sent to the reactor by a HPLC pump (JASCO, PU-2080). The pressure was controlled by a back-pressure regulator (JASCO, SCF-Bpg) and measured at upstream and downstream of the reactor. The temperature was controlled by a thermal air oven and was measured at the top, bottom and outside of the reactor.